

**SURFACTANT PROTEIN D FOR THE PREVENTION AND DIAGNOSIS OF
PULMONARY EMPHYSEMA**

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Abstract of the Disclosure

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Surfactant protein D (SP-D) is a 43-kDa member of the collectin family of collagenous lectin domain-containing proteins that is expressed in epithelial cells of the lung. The SP-D gene was targeted by homologous recombination in embryonic stem cells that were used to produce SP-D (-/-) mice. The SP-D (-/-) deficiency caused inflammation, increased oxidant production by isolated alveolar macrophages, abnormal surfactant structure and levels, and decreased SP-A expression. Therefore, disclosed is the SP-D (-/-) mouse as an excellent model for emphysema. Also included are models for testing emphysema therapies in the mouse model, methods for using SP-D protein or

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